Principles of organic farming

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Organic agriculture

- **Organic agriculture aims:**
  - **to balance social, economic and ecological goals within a specific cultural setting.**
  - **to establish a decentralized system for processing, distribution and marketing**
  - **at the production of produce high quality products in sufficient quantities**
  - **maintenance of the integrity and nutritional value of organic food and processed products through each step of the process from the field to consumption**
  - **development and adoption of new and innovative technologies while considering their long term social and ecological impacts**
  - **to create added value products at farm level**

Holistic approach

- **All the factors and activities related to agricultural production must be evaluated and handled as a whole**

Working with natural systems rather than seeking to dominate them

- Encouraging and enhancing biological cycles within the farming system that involve:
  - microorganisms,
  - soil flora and fauna,
  - plants and animals.
- Considering preferably the recycling/reusing of on-farm resources and waste management.

Adaptation to local conditions

- **Enhancement of crop production well adapted to the prevailing conditions**
  - **Soil**
  - **Climate**
  - **etc.**

Prevention of pollution

- Pollution that effects the environment, humans and animals is minimise with appropriate practices
- The environmental impact of all inputs is minimized and farm waste products are utilized as resources.
  - Locally existing inputs are preferred.
- Synthetic fertilizers, pesticides, growth regulators and additives are excluded or severely restricted.

Soil fertility

- Maintenance and increase of long-term soil fertility by providing optimal conditions for soil biological activity
- Recycling materials and resources to the greatest extent possible within the farm and its surroundings community
- Use appropriate techniques to conserve soil fertility:
  - Tillage
  - Crop rotation
  - Intercropping
  - On-farm biomass recycling
  - Organic materials
  - Cover crops
  - Green manures

Crop rotations

- Soil fertility
  - Improves organic matter, plant nutrients and minimizes loses
- Increases biodiversity
- Provides control over pests and diseases
- Weed management
- Balances labour and equipment demand
- Distributes energy consumption over a period
- Balances yield
- Provides continuity in marketing

Tillage

- Tillage is practiced:
  - with suitable equipments
    - Use of appropriate equipment in order not to damage soil structure must not be damaged
  - when soil is not too wet or too dry
- Minimum tillage is recommended
- Bare soil cultivation is avoided
- Mulching or cover crops are promoted
  - Cover crops help to
    - control erosion,
    - reduce water loss,
    - create a habitat for beneficial insects

Enhanced biodiversity

- Maintenance of genetic diversity of the agricultural system and its surroundings including the protection of plant and wildlife habitats
- Maintain a green belt around field margin and establishing hedges with leguminous, flowering, non-flowering, deciduous, evergreen, tall & short plants
  - Presence of weeds, host plants, green hegdes, windbreaks help to the increase of beneficial insects by creating and maintaining a habitat

Monocultures are avoided

Disease and pest management

- Use of resistant species/varieties/rootstocks
- Creation of habitats for natural enemies
- Establishment of a monitoring system for the main pests
- Use of biotechnical methods and soft chemicals when necessary
  - Pheromone and bait traps, host or repellent plants,
  - Permitted organic preparations
    - Plant extracts, copper, sulphur etc.

Energy use

- Minimized use of fossil fuels
- Use renewable energy sources at all levels of the organic food chain in locally organized agricultural systems
- Avoid long distance nutrient transfers
- Avoid long distance transportation of goods

Attractive agricultural landscape

- Designing organic farms to have an attractive landscape and multifunctinality
- Creation of a relaxing atmosphere that increases efficiency

Wellbeing standards for the farmers

- Increased social standards for the farmer by providing an adequate return and satisfaction from their work, including a safe working environment
- Farmers are ready to integrate with other sectors of the economy e.g. agrotourism